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Procedure and Equipment to Improve the Audio Quality in a Mobile Radio Network

Description

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The invention concerns a procedure and equipment for improving audio quality in a mobile radio network according to the characterizing clause of the patent claims 1.

10 The mobile radio network, e.g. the GSM-mobile radio network, is -- apart from a given range limitation and the used speech decoder -- sound (acoustic pattern) neutral.

The sound perceived by the mobile radio user is determined primarily by the mobile radio equipment being used; whereby, each manufacturer of the equipment "stamps" a different sound into his equipment. The currently available end device models have, to a great
15 extent, large sound differences, which are perceived by the device users to be pleasant or less-than-pleasant.

It was determined by public opinion polls and surveys, for example, that the GSM1800 networks have a better sound than the GSM900 networks. Since this cannot be
20 comprehended technically, it seems a likely supposition that this is because of the equipment's characteristics; that is, the better sound results not from the GSM1800 networks, but from the end devices used in this network.

25 The task of the invention is based on creating a procedure and equipment with which an improvement of the audio quality in mobile radio networks can be obtained, independent of the end devices.

The characterizing features in patent claim 1 solve the task.

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The invention is based on the fact that a tone control or equalizer is switched into a corresponding audio path in a communication connection, which influences the audio quality in the audio path, dependent on the type of equipment or devices used in the connection.

Thus, the advantage is achieved that if there are eventual deficiencies of the audio quality of individual end device models, adjustments can be made on the network side, i.e. unnoticed by the user.

Now the network carrier, not the end device manufacturer, determines the sound characteristics of its network by determining the characteristics of the end devices' sound for each end device model.

This results in a direct quality leap for a network equipped with the invention. An end device with an inferior sound in a convention network gets a good sound quality in a network that uses the invention. The device user is then connected directly to the network quality, as shown above in the given opinion surveys.

Together with the end device, a tone control is configured into one of the audio paths so that it, for example, increases the level with a particularly muffled sounding device.

The mobile switching center (MSC) determines by query of the mobile equipment identification (IMEI: International Mobile Equipment Identity) the device model. The query of the IMEI is usually always already completed with the authentication procedure between the mobile station and the mobile radio network, so that the mobile radio network accepts only devices or equipment with certified IMEI.

The mobile switching center is known by the conversation of a corresponding audio path, so that this can be directly influenced by controlling one of the audio path's corresponding tone controls.